FY 2002–2004 PERFORMANCE BASED INCENTIVE

SECTION 1
GENERAL INFORMATION

Performance Incentive Number:	PBI-13 (Office of Nuclear Energy/Office of Science)		
Performance Incentive Short Title:	Nuclear Energy Research & Development		
Revision Number & Date:	Rev 3, December 16, 2003		
Maximum Available Incentive Fee:	$6350K($1500K FY02, $2300K FY03, $2550K FY04)		
Performance Incentive Type:	☒Base	☐Stretch	☐Superstretch
Duration:	☒Annual	☒Multi-year	
Fee Payment Type:	☒Completion	☐Progress	☐Provisional
DOE Technical Monitor:	Neil Burrell		
BBWI Technical Monitor:	James Lake		

(check appropriate box)

SECTION 2
PERFORMANCE OUTCOMES

Check Appropriate Box:

☐ Outcome #1 Deliver science-based, engineered solutions.

☐ Outcome #2 Complete environmental cleanup responsibly.

☐ Outcome #3 Provide leadership and support to optimize investments.

☒ Outcome #4 Enhance scientific and technical talent, facilities, and equipment.

SECTION 3
PERFORMANCE MEASURES AND EXPECTATION (S)

List associated performance measures and performance expectations for FY02 through FY04. Identify associated PBS # for each performance measures as appropriate.

Measure 1: Lead DOE efforts to revitalize Nuclear Energy and strengthen US leadership in nuclear technology, maintain and apply INEEL key capabilities and infrastructure to support DOE's Nuclear Energy Mission, and establish National User Facilities at INEEL (e.g. STAR, and facilities based on the ATR).

(FY02) Expectation 1.1: Lead the effort to develop a Generation IV Technology Roadmap. Complete the following second-year Generation IV roadmap milestones.

- Deliver the Interim Roadmap Report to DOE HQ by July 31, 2002. INEEL will document the down-select contained in the report to the DOE ID office. The down-select intends to identify 4-8 concepts to be included in the Final Roadmap report.

- Deliver the Final Roadmap Report to DOE HQ by September 30, 2002. Document the transmittal to the DOE ID office.

(FY02) Expectation 1.2: As a Nuclear Reactor Technology Lead Laboratory, provide effective leadership and coordination to DOE NE in areas that directly address the National Energy Policy by advancing the Generation IV R&D strategies and actions for a return to the utilization of nuclear power as a major, emission-free energy resource and assist in their development of initiatives on (1) regulatory and policy reform, (2) optimization of current fleet, (3) construction of new nuclear plants, and (4) optimization of the nuclear fuel cycle. Support industry and the NRC on plans for a PBMR technology demonstration facility decision selected by FY 2004.

- For a major Generation IV R&D program, deliver a program infrastructure and staffing assessment, including an international perspective on collaborations, to DOE ID by May 31, 2002.

- Support ANL in the development and execution of funded fuel cycle R&D programs. Document the INEEL support (i.e., scope of funded R&D projects) to DOE ID by September 30, 2002.

- Support Exelon's evaluation of a candidate site for a PBMR, and support the development of an integrated government (NRC/DOE) fuel-testing program for PBMR fuel. Specifically, support Exelon and NRC/DOE milestones planned for Fall/Winter 2001 and document to DOE-ID by March 30, 2002.

(FY02/FY03)Expectation 1.3: Develop INEEL user facilities by seeking necessary base funding toward the objective of having multiple facilities operational by September 30, 2004.

Complete the following milestones:

- Document to DOE-ID that the STAR Facility project turnover (per Form 432.02) has been completed by January 31, 2002.

- Support the development of a new User Facility based on the ATR by briefing DOE HQ stakeholders on resource needs and facility benefits to Generation IV R&D, working toward securing funding for the user facility, and obtaining an expression of support from a sponsor or program by September 30, 2002. Install the tritium infrastructure in the Safety and Tritium Applied Research facility, ready for assessment of operational readiness by September 15, 2003. ($100K)

Expectation 1.4: Lead the integrated AFC/Generation IV Programs

Complete the following milestones:

(FY03)

- Establish AFCI/Generation IV national directors and draft Gen IV and AFC program plans by Feb 1, 2003 ($150K)
- Prepare the two Reports to Congress on Generation IV. Deliver draft report to DOE and support DOE approval for issuance by Jan 24, 2003 ($150K)
- Complete major INEEL FY 2003 R&D program plan milestones, (subject to Appropriations) ($700K)

(FY04)

- Complete major INEEL Generation IV program milestones as listed in the INEEL Nuclear Energy Strategic Achievement Plan (dated January 2004), and any subsequent approved revisions by September 30, 2004. ($650K)
- Utilize advanced computing capabilities in support of Generation IV R&D activities as specified in the INEEL Nuclear Energy Strategic Achievement Plan (dated January 2004), and any subsequent approved revisions, by September 30, 2004. ($50K)

(FY03)Expectation 1.5: Plan and execute NE Transition Account

Complete the following milestones:

- Integrate INEEL facilities into the AFC program plan by Feb 15, 2003. ($200K)

- Complete support activities for the separations engineering-scale demonstration in the approved preconceptual plan by Sept 15, 2003. ($400K)

- Complete support activities for Cs/Sr flowsheet development in the approved preconceptual plan by Sept 15, 2003. ($300K)

- Complete support activities for the spent fuel treatment facility in the approved preconceptual plan by Sept 15, 2003. ($100K)

Expectation 1.6: Organize GIF Collaborative R&D activities

Complete the following milestones:

(FY03)

- Organize and facilitate all scheduled GIF meetings. ($100K)

(FY04)

- Organize and facilitate all scheduled FY 2004 GIF meetings by September 30, 2004. ($100K)

Expectation 1.7: Build university and laboratory collaborations for the new NE mission

Complete the following milestones:

(FY03)

- By September 15, 2003, develop a formal partnership with at least one university or one laboratory in either AFC, Generation IV, or Nuclear Space Initiative. ($100K)

(FY04)

- By September 15, 2004, develop at least one new formal partnership with a university, laboratory, or international partner in either AFCI, Generation IV, or NGNP. ($100K)

(FY04) Expectation 1.8: Plan and conduct research, design and analytical studies in support of the AFCI.

Complete the following milestones:

- Complete major INEEL AFCI program milestones as listed in the INEEL Nuclear Energy Strategic Achievement Plan (dated January 2004), and any subsequent approved revisions by September 30, 2004. ($250K)

(FY04) Expectation 1.9: Develop the overall Program Plan for the Next Generation Nuclear Power Plant demonstration program and lead R&D activities.

Complete the following milestones:

- Complete major INEEL NGNP program milestones as listed in the INEEL Nuclear Energy Strategic Achievement Plan (dated January 2004), and any subsequent approved revisions by September 30, 2004. ($700K)

(FY04) Expectation 1.10: Develop the overall Program Plan for the Advanced Gas Reactor Fuel Development and Qualification Program and lead R&D activities.

Complete the following milestones:

- Complete major INEEL AGR Fuels program milestones as listed in the INEEL Nuclear Energy Strategic Achievement Plan (dated January 2004), and any subsequent approved revisions by September 30, 2004. ($400K)

(FY04)Expectation 1.11: Increase the utilization of the Advanced Test Reactor irradiation test capability by acquiring new programs and new customers beyond the Naval Reactor prime sponsor programs by September 30, 2004. ($200K)

(FY04)Expectation 1:12: Complete INEEL Nuclear Hydrogen program milestones as listed in the INEEL Nuclear Energy Strategic Achievement Plan (dated January 2004), and any subsequent approved revisions, by September 30, 2004. ($100K)

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SECTION 4
FEE SCHEDULE

Identify fee payment schedule for the PBI and the type of payments to be made (e.g., provisional, progress, final) and the basis of the payment (e.g., per canister completed, per assembly, earned value, etc.)

The measures, schedule, and payment basis will be rated on objective milestones and deliverables.

Expectation 1.1: The maximum fee available is $700Kin FY02. Fee will be reduced by 1% per workday if the established milestone date is missed. A ± 10% quality assessment will be given to each deliverable as a measure of benefit to the government.

Expectation 1.2: The maximum fee available is $500K in FY02. Fee will be reduced by 1% per workday if the established milestone date is missed. A ± 10% quality assessment will be given to each deliverable as a measure of benefit to the government.

Expectation 1.3: The maximum fee available is $300K in FY02. The maximum fee available in FY-03 is $100K. Fee will be reduced by 1% per workday if the established milestone date is missed. A ± 10% quality assessment will be given to each deliverable as a measure of benefit to the government.

Expectation 1.4: The maximum fee available is $1000K in FY03. The maximum fee available in FY-04 is $700K. Fee will be distributed uniformly among the deliverables. Fee will be reduced by 1% per workday(up to 10 days after which the milestone is considered missed and the fee is zero) if the established milestone date is late . A ± 10% quality assessment will be given to each deliverable as a measure of benefit to the government.

Expectation 1.5: The maximum fee available is $1000K in FY03. Fee will be reduced by 1% per workday if the established milestone date is missed. A ± 10% quality assessment will be given to each deliverable as a measure of benefit to the government.

Expectation 1.6: The maximum fee available is $100K in FY03. The maximum fee available in FY-04 is $100K. Fee will be reduced by 1% per workday if the established milestone date is missed. A ± 10% quality assessment will be given to each deliverable as a measure of benefit to the government.

Expectation 1.7: The maximum fee available is $100K in FY03. The maximum fee available in FY-04 is $100K. . Fee will be reduced by 1% per workday if the established milestone date is missed. A ± 10% quality assessment will be given to each deliverable as a measure of benefit to the government.

Expectation 1.8: The maximum fee available is $250K in FY04. Fee will be distributed uniformly among the deliverables. Fee will be reduced by 1% per workday (up to 10 days after which the milestone is considered missed and the fee is zero) if the established milestone date is late. A ± 10% quality assessment may be given to each deliverable as a measure of benefit to the government.

Expectation 1.9: The maximum fee available is $700K in FY04. Fee will be distributed uniformly among the deliverables. Fee will be reduced by 1% per workday (up to 10 days after which the milestone is considered missed and the fee is zero) if the established milestone date is late. A ± 10% quality assessment may be given to each deliverable as a measure of benefit to the government.

Expectation 1.10: The maximum fee available is $400K in FY04. Fee will be distributed uniformly among the deliverables. Fee will be reduced by 1% per workday (up to 10 days after which the milestone is considered missed and the fee is zero) if the established milestone date is late. A ± 10% quality assessment may be given to each deliverable as a measure of benefit to the government.

Expectation 1.11: The maximum fee available is $200K in FY04. Fee will be determined as 10 cents for every dollar of actual costs associated with engineering design and project management, and billable ATR irradiation charges, for products or experiments (other than the prime test sponsors).

Expectation 1:12: The maximum fee available is $100K in FY04. Fee will be reduced by 1% per workday (up to 10 days after which the milestone is considered missed and the fee is zero) if the established milestone date is late. A ± 10% quality assessment may be given to each deliverable as a measure of benefit to the government.

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SECTION 5
PERFORMANCE REQUIREMENTS

PREVIOUS YEAR'S GATEWAY: (*Describe previous year's gateway (if applicable) that must be completed before fee can be paid under this performance measure. The requirements listed below are the gateway only requirements for this Performance Measure.)*

The Measures in this PBI are related to FY01 measures 2.2.3.1 (Generation IV Roadmap), 2.2.3.2 (STAR), 4.4.1.2 (NE Lead Laboratory), and 4.4.2.1 (Nuclear Energy R&D Strategy). These measures serve to continue the path forward for maintaining our NE lead laboratory role, capabilities, and infrastructure to support the nuclear energy industry.

GENERAL REQUIREMENTS: (*Describe other performance required beyond those stated in measure or expectation such as cost constraints or requirements contained in the approved project plan.)*

DEFINE COMPLETION: The Measures, schedule, and payment basis will be rated on objective milestones and deliverables.

COMPLETE DOCUMENTS LIST: The current list of Measures and documents are defined section 3 above.

ASSUMPTIONS/TECHNICAL BOUNDARY CONDITIONS AND REMEDY STATED: *(List foreseeable impacts to performance, which are not covered under the Contract. If the assumption or condition proves false the remedy shall be in effect. If remedy is not possible the next step is renegotiation.)*

None